Amendments to the claims:

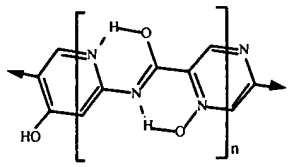
Please replace all prior versions and listings of the claims with the following amended claims:

CLAIMS

What is claimed is:

1. (Currently Amended) A composite material comprising a polymer with an amide back-bone structure represented by the formula [-Ht(OH)-C(OH)=N-]n, wherein Ht are heterocycles comprising hetero-atoms ~~comprising amide linkages~~ with the hetero-atoms being positioned beta relative to nitrogen atoms forming ~~the~~ amide linkages forming the amide back-bone structure.

2. (Currently Amended) The composite material of claim 1, wherein ~~the amide linkages link one or more of aromatic structures and heterocyclic structures~~ the amide back-bone is substantially represented by the structure:



3. (Currently Amended) The composite material of claim [2] 1, wherein the hetero-atoms are nitrogen.

4. (Currently Amended) The composite material of claim [2] 1, wherein the heterocyclic structures comprise an alcohol functional group that is positioned beta to at least a portion of the amide linkages.

5. (Currently Amended) The composite material of claim [2] 1, wherein the aromatic structures comprise one or more function groups positioned beta relative to at least a portion of the amide linkages, the one or more functional group being selected from a

group consisting of an alcohol functional group, a thiol functional group and an amine functional group.

6. (Currently Amended) The composite material of claim [2] 1, wherein aromatic structures include bicyclic sub-structures.

7. (Previously Presented) The composite material of claim 1, further comprising a binder material.

8. (Previously Presented) The composite material of claim 7, wherein the binder material comprises one or more materials selected from a group consisting of epoxy, rubber, plastic, polyurethane and silicone.

9. (Previously Presented) The composite material of claim 2, wherein the amide linkages are positioned para between the aromatic structures and the heterocyclic structures.

10. (Withdrawn) A polymer comprising amide linkages between aromatic structures and heterocyclic structures, wherein the heterocyclic structures comprise hetero-atoms positioned beta relative to a nitrogen of the amide linkages.

11. (Withdrawn) The polymer of claim 10, further comprising alcohol groups positioned para to the amide linkages on at least one of the aromatic structures and heterocyclic structures.

12. (Withdrawn) The polymer of claim 10, wherein hetero-atoms include nitrogen atoms.

13. (Withdrawn) The polymer of claim 12, wherein the nitrogen atoms are positioned beta relative the nitrogen of the amide linkages.

14. (Withdrawn) The polymer of claim 10, wherein the aromatic structures and the heterocyclic structures are linked in a para configuration between the amide linkages.

15. (Withdrawn) The polymer of claim 10, further comprising hydroxyl groups.

16. (Withdrawn) The polymer of claim 15, wherein the hydroxyl groups are positioned beta with respect to the amide linkages on at least one of the aromatic structures and the heterocyclic structures.

17. (Currently Amended) A method for making a polymer composite material comprising:

a) reacting a carboxylic acid precursor and an amine precursor in a suitable solvent to form an aromatic polyamide, wherein the carboxylic acid precursor comprises an aromatic structure and two reactive carboxylic acid groups and the amine precursor comprises a heterocyclic structure and two reactive amine groups and wherein the heterocyclic structure comprises a hetero-atom in a beta position relative to one or more of the reactive amine groups; and

b) isolating the aromatic polyamide, wherein the aromatic polyamide has a formula substantially represented by [-Ht(OH)-C(OH)=N-]n or [-(OH)Ar(OH)-C(OH)=N-Ht-N=C(OH)-]n wherein Ar are aromatic moieties and Ht are heterocycles comprising hetero-atoms with the hetero-atoms being positioned beta relative to nitrogen atoms forming amide linkages forming an amide back-bone structure of the polymer composite material.

18. (Original) The method of claim 17, wherein the hetero-atom is a nitrogen.

19. (Original) The method of claim 17, wherein the aromatic carboxylic acid precursor comprises a functional group positioned beta to one or more the reactive carboxylic acid groups, wherein the one or more functional groups are selected from a group consisting of an alcohol functional group, a thiol functional group and an amine functional group.

20. (Original) The method of claim 17, wherein the heterocyclic amine precursor comprises a functional group positioned beta to the one or more of the reactive amine groups, wherein the functional group is selected from a group consisting of an alcohol functional group, a thiol functional group and an amine functional group.

21. (Original) The method of claim 17, wherein the two reactive carboxylic acid groups are positioned para to each other on the aromatic structure.

22. (Original) The method of claim 17, wherein the reactive amine groups are positioned para relative to each other on the heterocyclic structure.

23. (Original) The method of claim 17, further comprising incorporating the aromatic polyamide in a binder material.

24. (Original) The method of claim 23, wherein the binder material is selected from a group consisting of epoxy, rubber, plastic, polyurethane and silicone.

25. (Original) The method of claim 17, further comprising integrating the aromatic polyamide into a fabric material.

26. (Withdrawn) A method of making an aromatic polyamide comprising:

a) combining a first precursor with a second precursor to form the aromatic polyamide, wherein the first precursor comprises two reactive carboxylic acid groups bonded to an aromatic structure and the second precursor comprises two reactive amine groups bonded to a heterocyclic structure; and

b) isolating the aromatic polyamide.

27. (Withdrawn) The method of claim 26, further comprising combining a third precursor with the first precursor and the second precursor, wherein the third precursor comprises two reactive carboxylic acid groups bonded to an aromatic structure that is different from the aromatic structure of first precursor.

28. (Withdrawn) The method of claim 26, further comprising combining a third precursor with the first precursor and the second precursor, wherein the third precursor comprises two reactive amine groups bonded to a heterocyclic structure that is different from the heterocyclic structure of the second precursor.

29. (Withdrawn) The method of claim 26, wherein the heterocyclic structure of the second precursor comprises a nitrogen atom positioned beta to at least one of the reactive amine groups.

30. (Withdrawn) The method of claim 29, wherein the heterocyclic structure of the second precursor comprises an alcohol functional group.

31. (Withdrawn) The method of claim 30, wherein the alcohol functional group is positioned beta to at least one of the reactive amine groups.

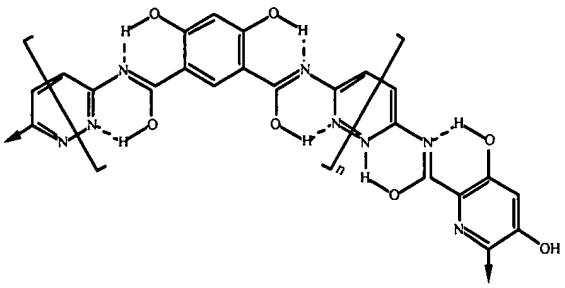
32. (Withdrawn) The method of claim 26, wherein the aromatic structure comprises an alcohol functional group.

33. (Withdrawn) The method of claim 32, wherein the alcohol functional group is positioned beta to at least one of the reactive carboxylic acid groups.

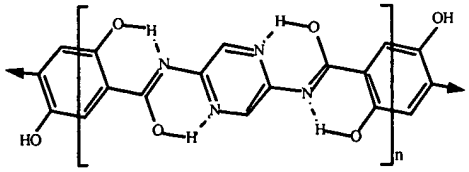
34. (New) A composite material comprising a polymer with an amide back-bone structure represented by the formula [-(OH)Ar(OH)-C(OH)=N-Ht-N=C(OH)-]n, wherein Ar are aromatic moieties and Ht are heterocycles comprising hetero-atoms with the hetero-atoms of the heterocycles being positioned beta relative to nitrogen atoms forming amide linkages forming the amide back-bone structure.

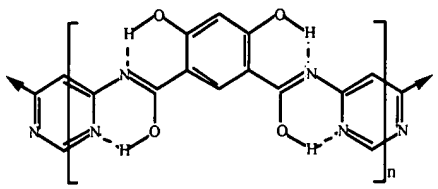
35. (New) The composite material of claim 1, wherein the amide back-bone is substantially represented by at least on of the structures A-C:

A)



B)



C) 

36. (New) The composite material of claim 34, wherein the hetero-atoms are nitrogen.

37. (New) The composite material of claim 34, wherein the heterocyclic structures comprise an alcohol functional group that is positioned beta to at least a portion of the amide linkages.

38. (New) The composite material of claim 34, wherein the aromatic structures comprise one or more function groups positioned beta relative to at least a portion of the amide linkages, the one or more functional group being selected from a group consisting of an alcohol functional group, a thiol functional group and an amine functional group.

39. (New) The composite material of claim 34, wherein aromatic structures include bicyclic sub-structures.

40. (New) The composite material of claim 34, further comprising a binder material.

41. (New) The composite material of claim 34, wherein the binder material comprises one or more materials selected from a group consisting of epoxy, rubber, plastic, polyurethane and silicone.

42. (New) The composite material of claim 34, wherein the amide linkages are positioned para between the aromatic structures and the heterocyclic structures.